PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 79485	**FOR FURTHER ACTION** See Form PCT/IPEA/416	
International application No. PCT/DK2004/000521	International filing date *(day/month/year)* 02.08.2004	Priority date *(day/month/year)* 05.08.2003
International Patent Classification (IPC) or national classification and IPC A23K1/175, A23K1/10, A23K1/18, A61K33/38, A61K35/32		
Applicant THOMSEN, Jorn Oddershede		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
   a. ☒ *sent to the applicant and to the International Bureau)* a total of 2 sheets, as follows:
      ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒	Box No. I	Basis of the opinion
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
12.01.2005	21.02.2005
Name and mailing address of the international preliminary examining authority: European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Rooney, K Telephone No. +31 70 340-3931

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/DK2004/000521

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

   ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
   - ☐ international search (under Rules 12.3 and 23.1(b))
   - ☐ publication of the international application (under Rule 12.4)
   - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

   Description, Pages

   1-15 as originally filed

   Claims, Numbers

   1-12 received on 12.01.2005 with letter of 12.01.2005

   ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
   - ☐ the description, pages
   - ☐ the claims, Nos.
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
   - ☐ the description, pages
   - ☐ the claims, Nos.
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

* *If item 4 applies, some or all of these sheets may be marked "superseded."*

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-12
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-12
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-12
	No:	Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V.

1 The following documents are referred to in this communication:

D1: US-A-6 017 901 (KHAN RIAZ ET AL) 25 January 2000 (2000-01-25)
D2: WO 96/35720 A (KHAN RIAZ ; KONOWICZ A PAUL (GB); FIDIA ADVANCED BIOPOLYMERS SRL (IT);) 14 November 1996 (1996-11-14)
D3: US-A-4 746 504 (GREENMAN BENJAMIN ET AL) 24 May 1988 (1988-05-24)
D4: EP-A-0 480 189 (ALTERGON SA) 15 April 1992 (1992-04-15)
D5: US 2003/099718 A1 (BURRELL ROBERT EDWARD ET AL) 29 May 2003 (2003-05-29)
D6: DATABASE WPI Section Ch, Week 199816 Derwent Publications Ltd., London, GB; Class B04, AN 1998-177283 XP002296635 & RU 2 087 148 C1 (TRETYAKOV V V) 20 August 1997 (1997-08-20)

2. Novelty

The documents D1-D5 disclose compositions suitable for use as a supplement which contain hyaluronate (a material derived from cartilage) and a silver salt (see D1-D5: passages cited in search report). The subject-matter of claims 1 and 11 differs from the teaching of these documents in that cartilage is used. Therefore, the present application meets the criteria of Article 33(1) PCT, because the subject-matter of independent claims 1 and 11 is new in the sense of Article 33(2) PCT.

3. Inventive Step

The present application meets the criteria of Article 33(1) PCT, because the subject matter of claims 1 and 11 is considered to involve an inventive step in the sense of Article 33(3)PCT.

Document D6, which is considered to represent the most relevant state of the art to the subject matter of claims 1 and 11, discloses compositions containing colloidal silver. The compositions are used for treating distemper and parvoviral enteritis in livestock animals such as mink (see D6; abstract). The subject-matter of independent claims 1 and 11 differs

from the disclosure of D6 in that a material derived from cartilage is added additionally to the composition. The effect of this addition is that smaller amounts of silver compound can be used in the compositions while retaining its therapeutic properties. Therefore the objective problem solved by the compositions of the present invention is a means of reducing the required concentration of silver in supplements. The means by which this problem is solved, namely the synergy provided by the addition of cartilage is not suggested by the available prior art.

4. Dependent claims

Claims 2-10 and 12 are dependent on claims 1 and 11 respectively and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Amended claims of 11 January 2005

1. Supplement preparation including
a) a first active component in form of biologically accessible silver, and
b) a second active component of cartilage,
and any conventional accessory agents or additives.

2. Preparation according to claim 1, characterised in that it includes one or more additional active components.

3. Preparation according to claim 2, characterised in that it includes one or more additional active components selected among antimony pentasulphide, metallic tin and/or a tin salt, metallic zinc and/or a zinc salt, a sulphur containing substance and/or a iodine containing substance.

4. Preparation according to claim 3, including hepar sulphuris as a sulphur containing substance.

5. Preparation according to claim 3, including tare powder as a iodine containing substance.

6. Preparation according to claim 1, characterised in that the first active component (a) is a colloidal silver.

7. Preparation according to claim 1, characterised in that the second active component (b) is ground and/or dried cartilage.

8. Preparation according to claim 1, characterised in that the second active com-

ponent (b) is obtained from a cartilaginous fish, preferably a shark.

9. Preparation according to claim 1, characterised in that the content of cartilage, calculated as dry matter, is 100 - 12,000 parts by weight per 1 part by weight of biologically accessible silver, preferably 200 – 6000 parts by weight per 1 part by weight of biologically accessible silver and most preferably 300 – 3000 parts by weight per 1 part by weight of biologically accessible silver.

10. Preparation according to any one of the preceding claims, characterised in that it contains 0.5 – 50 mg of biologically accessible silver per litre preparation, preferably 1 – 20 mg of silver per litre.

11. Use of (a), a first active component in form of biologically accessible silver, and (b), a second active component of cartilage, and any additional active components and/or conventional accessory agents or additives for the preparation of a health-promoting supplement preparation for livestock.

12. Use according to claim 12 of (a), a first active component in form of biologically accessible silver, and (b), a second active component of cartilage, and any additional active components and/or conventional accessory agent or additives for the preparation of a preparation for the prevention and treatment of plasmacytosis, puppy disease, enteritis virus, three-day sickness and/or "sticky" kits in mink.